7500014

## ARTIE UNIKHEID SHAMIES OF AMIERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## D. I. van der Have B.N.

Williereas, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF SEVENTEEN YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXTUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT

HARD FESCUE

'Scaldis'

in Testimony Watercot, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 2nd day of February in the year of our Lord one thousand nine hundred and seventy-eight

Altest.

Stands L. W.

Scting

Commissioner

Plant Variety Protection Office

Grain Division

Agricultural Marketing Scroics

Secretary of Agriculture

# UNITED STATES DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782

FORM APPROVED OMB NO. 40-R3712

### APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.  1. VARIETY NAME OR TEMPORARY	2. KIND NAME		FOR OFFICIAL USE ONLY			
DESIGNATION			PV NUMBER 75	2014		
Scaldis	Hard fescue		FILING DATE	TIME		
3. GENUS AND SPECIES NAME	4. FAMILY NAME (Bo	tanical)	9.17.74	10 A.M.		
Festuca ovina ssp.	Graminae		FEE RECEIVED	BALANCE DUE		
duriuscula	5. DATE OF DETERM	MINATION	\$250.00	s 9-11-14		
	1972		\$ 250.00	15-12-16		
			\$850.00	8. TELEPHONE AREA		
6. NAME OF APPLICANT(S)	Code)	nd No. or R.F.D. No.,		CODE AND NUMBER		
Koninklijk Kweekbedrijf en	P.O. Bo	x /, PiLLa 3515- PiLLa lands 9907	nd 3648			
Zaadhandel	- Kapeli	<del>2 35+5</del>				
D.J. van der Have B.V.	Neclier	29 W	1/16/78			
		TIO. STATE OF INCO		11. DATE OF INCOR-		
9. IF THE NAMED APPLICANT IS NOT A PE ORGANIZATION: (Comporation, partnership,	association, etc.)	10. STATE OF INCO	REGINATION	PORATION		
Corporation		Netherland		8th March 1973		
12. Name and mailing address of applic	ant representative	s), if any, to serve	in this application a	and receive all papers:		
Mr. David J. Hayes,	, 7 7	2/Ac	. He			
1610 Forest Ridge Place.	m. D. J.	3648 1	$\gamma i r$			
Mt. Vernon Washington 98273	120. Box	< / / / / / ·	1			
	Relland	3648	1/4/1			
	Ne the lan	da	1			
13. CHECK BOX BELOW FOR EACH ATTAC	MENT SUBMITTED:	<del></del>				
13. CHECK BOX BELOW FOR EACH ATTACK	eding History of the	Variety (See Secti	ion 52 of the Plant V	ariety Protection Act.)		
Tab. Exhibit B, Botanical Des	cription of the Varie	ety				
13C. Exhibit C, Objective Desc	cription of the Varie	ty				
🔀 130. Exhibit D, Data Indicativ	e of Novelty					
x 13E. Exhibit E, Statement of the	ne Basis of Applica	nt's Ownership	•			
14A. Does the applicant(s) specify that (See Section 83(a), (If "Yes," a	at seed of this varie	ty be sold by varie	ty name only as a cl	ass of certified seed?		
14B. Does the applicant(s) specify th	at this variety be			nerations of production		
limited as to number of generation	ons?	beyond bree		( <b>D</b>		
	YESNO	. —	<del>-</del>			
The applicant declares that a viable ance of a certificate and will be rep	sample of basic see	ed of this variety w y in accordance wi	ill be deposited upon th such regulations	n request before issu- as may be applicable.		
The and anaigned applicant(s) of th	is sexually-reproduc	ed novel plant vari	iety believes that the	e variety is distinct,		
uniform, and stable as required in Plant Variety Protection Act.	Section 41 and is en	titled to protection	under the provision	s of Section 42 of the		
Applicant is informed that false re	presentation herein	can jeopardize prot	ection and result in	penalties.		
Tippiteum to minime me and	•	_	#			
0.3.4074			4			
August 2nd, 1974.			(SIGNATURE OF APPLI	CANT)		
			D.J. Glas.	· · · · · · · · · · · · · · · · · · ·		
			(SIGNATURE OF APPL	CANT		
(DATE)			AND BAT ONE OF ALL E			

SCALDIS. HARD FESCUE.

Exhibit 13A.

Hard fescue plants were collected out of the eastern part of the Netherlands in spring 1965. From 50 locations about 6 plants per location were collected so in total 300 plants.

The plants were cloned and observed during 1965 and 1966 in a clone nursery. The clones with the same general characters have been combined in isolation plots for syn 1 seed production in 1967 of experimental varieties.

During 1968 till 1972 these experimental varieties have been observed on two lawn trials in the S.W. of the Netherlands, one on clay soil and one on sandy soil.

By 1969 the experimental HDu2 was proved to have superior turf qualities. Syn 2 seed of HDu2 was harvested in 1970. In 1970 a spaced plant trial and a new turf trial were established to compare the syn 1 and the syn 2 of the experimental HDu2.

No genetic shift in uniformity and turf quality was observed.

By 1972 it was decided to produce enough breeders seed for the anticipated need over the next 15 years and to release the variety in the future under the varietal name of SCALDIS.

Exhibit 13B.

There are no identifying seed characteristics.

The chromosome number 2n=42.

The growth habit of spaced plants in fall when planted in spring of the same year is prostrate.

The colour of the leaf is dark-grey-green, in comparison with C-26 which is dark green.

Time of heading is fairly early.

Average date of heading May the 1st, in comparison with C-26 April 24th (52 NL).

Addition to Exhibit A. Scaldis 7500014.

### Variants and their frequencies.

During the years of registration trials no "variants" observed.

#### INSTRUCTIONS

SEP 17 1974

SEP 17 1974

SEP 17 1974

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GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Hyattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

#### ITEM

- Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.
- 13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.
- 13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.
- 13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

ORM GR-470-37 (3-76)

NAME OF APPLICANT(S)

0 - ABSENT

8. LEAF BLADE:

3 COLOR:

4 = DARK GREEN (CASCADE) 5 - HEUT CHEEN

Koninklijk Kweekbedrijf en

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782

OBJECTIVE DESCRIPTION OF VARIETY FESCUE (Festuca spp.)

VARIETY NAME OR TEMPORARY DESIGNATION

Scaldis

Zaadhandel, D.J. van der Have B.V.	Scaldis
	FOR OFFICIAL USE ONLY
DDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	PVPO NUMBER
Kapelle 3615, PB 1,	7500014
Netherlands.  ace the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the appropriate number that describes the varietal character of this variety in the boxes because the propriate that the	below. Place a zero in first box (e.g. 0 8 9 oz 0 9) when
tice the appropriate number that describes the varietal character of this variety in the boxes of mber is either 99 or less or 9 or less. Characteristics described, including numerical measures mber is either 99 or less or 9 or less. Characteristics described, including numerical measures	ments, should represent those that are typical to
mber is either 99 or less or 9 or less. Characteristics described, including numerical measured masses may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur nges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur nges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur nges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur nges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur nges may be given also.	ib leaving of test area Rilland-Wageningen
inges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur inges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultur in Describe plant colors; designate system used: I.V.R.O. System	stablish the most adequate Variety Identification. Netherlar
ne plant colors; designate system used: 1. V. R. U. SYSUEM Describes of answered, however, completeness should be striven for in order to established not be answered, however, completeness should be striven for in order to established not be answered, however, completeness should be striven for in order to established.	lication variety)
1. SPECIES: (With comparison varieties for uso below - use varieties with 13 = GOAR	
1 = F. ARUNDINACEA (TALL) 11 = ALTIA 12 = TRADER 2 = F. PRATENSIS (MEADOW) 21 = ENSIGN 22 = TRADER 2 = TRADER 2 = TRADER 2 = TRADER 2 = TRADER	.IGHT 33 = JAMESTOWN
4 = F. RUBRA SSP. RUBRA (NEB) 61 = DURAR - 62 = BILJART (C-26) 5 = F. OVINA VAR. OVINA (SHEEP) 61 = DURAR 62 = BILJART (C-26) 63 = 64 = 100   64 = 100	SCALDIS
7 = OTHER (SPECIFY) F	
2. CYTOLOGY	
42 20 CHROMOSOME NUMBER	
3. ADAPTATION: (O = Not Tested; 1 = Not Adapted; 2 = Adapted)	
3. ADAPTATION: (0 5 Not reside)	South East fo
2 NORTHEAST 2 NORTH CENTRAL	(SPECIFY) OVERBOOKERS
4. MATURITY: (50% Headed) Give Test Area Wageningen - Nethe	rlands
DAYS EARLIER THAN	
MATURITY SAME AS	RISON VARIETY
0 5 DAYS LATER THAN	
5. PLANT HEIGHT: (At maturity to top of panicle)	
18 2 8	
mm SHORTER THAN	
HEIGHT SAME AS	RISON VARIETY
1 1 8 mm TALLER THAN 6 2	·
6. GROWTH HABIT (Mature)	
2 1 = ERECT (KENTUCKY 31) 2 = SEMI ERECT (HIGHLIGHT) 3 = F	PROSTRATE
7. RHIZOMES	
mm LENGTH	
0 0 = ABSENT 1 = WEAKLY CREEPING DARGOTT 2 - STRONGLY	CREEPING (BOREAL) 3 = OTHER

.: 1 = LIGHT GREEN (GOLFROUD) - 2 = MODERATELY LIGHT GREEN (HIGHLIGHT) - 3 = MEDIUM GREEN (JAMESTOWN,

6 - GRAYGREEN 7 - OTHER(SPECIFY)\_

KENTUCKY 31)

FORM GR-470-37 (PAGE 2)	750001-SCALDIS
8. LEAF BLADE:	
0 ANTHOCYANIN: 0 = ABSENT 1 = PRESENT 1 HAIF	1 = SMOOTH  RS (BASAL): 0 = ABSENT 1 = PRESENT
mm LENGTH (FIRST LEAF BELOW FLAG LEA	( <del></del>
mm SHORTER THAN	mm NARROWER THAN
LENGTH SAME AS	PARISON WIDTH SAME AS COMPARISON VARIETY
mm LONGER THAN	mm WIDER THAN
9. LEAF SHEATH (Plant Base):	
2 COLOR: 1 = WHITE (HIGHLIGHT) 2 = RED  10. PANICLE (Mature plant)	1 AURICLE HAIRINESS: 0 = ABSENT 1 = PRESENT
10. PANICLE (Mature plant)	
NUMBER OF PANICLES PER PLANT (FIRST YE	EAR OF PRODUCTION - FALL OR SPRING PLANTING SPECIFY
0 9 0 mm LENGTH	GRAMS OF SEED PER PANICLE
mm SHORTER THAN	GRAMS LESS SEED THAN
	PARISON WEIGHT SAME AS COMPARISON VARIETY
2 0 mm LONGER THAN 6 2	GRAMS MORE SEED THAN
2 SHAPE: 1 = NARROW-TAPERING 2 = EGG SHAPE	3 = OBLONG 4 = OTHER (SPECIFY)
2 TYPE: 1 = OPEN 2 = INTERMEDIATE 3 = 0	COMPACT
2 HABIT: 1 = ERECT 2 = NODDING	
2 BRANCHES: 1 = SMOOTH 2 = ROUGH	· • · · · · · · · · · · · · · · · · · ·
4 COLOR (At 50% flowering): 1 = YELLOWISH GREEN 6 = OTHER (SPECIFY) 11. PALEA:	2 = GREEN 3 = BLUISH GREEN 4 = PURPLISH 5 = REDDISH
<del>                                     </del>	· ·
HAIRS (ON KEELS): 0 = ABSENT 1 = SHORT (OL	DS) 2 = LONG (RAINIER)
12. LEMMA:	
1 HAIRS: 0 = ABSENT 1 = PRESENT	TEXTURE: 1 = SMOOTH 2 = ROUGH
4 4 mm LEMMA LENGTH	9 7 mm LEMMA WIDTH
0 1 mm SHORTER THAN 6 2	mm NARROWER THAN
LENTGH SAME AS	PARISON WIDTH SAME AS COMPARISON VARIETY
mm LONGER THAN	1 2 mm WIDER THAN 6 2
1 AWNS: 0 = ABSENT 1 = PRESENT	· 
1 0 mm AWN LENGTH	<b>5</b>

<b>.</b>			75000	14 SCALDI	. م
FORM GR-470-37 (PAGE 3)			747000	1 0 -1, - 02	
12. LEMMA:	<u>-</u> ])				
LENGTH SAME AS		MPARISON RIETY	N .	•	
mm LONGER THAN	<u>-  </u>				
13, SEED:		-			
5 3 9 mm LENGTH		g	7 mm WIDTH		
mm SHORTER THAN	<u>-</u> )	<u> </u>	mm. NARROWER	THAN	
LENGTH SAME AS	COMP.	ARISON ETY	WIDTH SAME AS.	COMPARISON	ı
0 7 1 mm LONGER THAN 6	2		1 2 mm WIDER THAN	6 2	
0 8 9 8 GRAMS PER 1000 SEED				•	
GRAMS LESS THAN	E)	ı			
WEIGHT SAME AS	COMP	PARISON ETY			
0 1 8 1 GRAMS MORE THAN 6	<u> </u>				
14. DISEASE, INSECT, AND NEMATODE (O =	Not Tested, 1	= Susceptib	ole, 2 = Resistant):		
0 HELMINTHOSPORIUM VAGANS	0 H. SC	ROKINIA	NUM	H. DICTYOIDES	
0 RHIZOCTONIA SOLANI	2 ERYS	SIPHE GR	AMINIS	0 USTILAGO STRIIFORMIS	<u>.</u>
2 FUSARIUM NIVALE	0 F. BC	DSEUM		2 TYPHULA IOTANA	
2 PUCCINIA GRAMINIS	0 <u>P. ST</u>	RIIFORM	us	P. POAE-NEMORALIS	
2 P. CORONATA	O PYTI	אוטא טנז	LIMÜW	2 CORTICIUM FUSCIFORM	
O SCLEROTINIA HOMEOCARPA	0 INSE	:ст		O NEMATODE	
OTHER	ОТН	ER		OTHER	
15. GIVE VARIETY OR VARIETIES THAT MC indicate degree of resemblance (D.R.) by place 1 = Application variety is less than comparison 3 = More than, better, greater, darker, more of	cing in the colu on variety	ımn marke	LE THE APPLICATION VA d, D.R., one or the following 2 = Same as	RIETY. For the following characters numbers:	<del>_,</del> _
		D.R.	CHARACTER	VARIETY	D. R.
GERMINATION RATE - P. 1 do t	6.2	2	SEED YIELD	Biljart - 62	3 x
BHIZOME LENGTH Biljart - (	04	3	GROWTH HABIT	11	$\frac{3}{2}$
LEAF WIDTH		3	PANICLE SHAPE	11	1
PANICLE COLOR "		3	COLD INJURY	11	2
SHADE TOLERANCE "		2	HEAT	11	2
DROUGHT 11		2	DISEASE∙≒	11	2

\*\*Specify each disease evaluated.

Scaldis somewhat x more erect. , 6

Exhibit 13D.

Scaldis Hard fescue is the first dark-grey-green, fairly early heading variety to be developed.

Compared with the average collected material, a considerable improvement was obtained in colour, turf density, persistancy and uniformity.

Exhibit 13E.

The original material was collected by the staff of D.J. van der Have B.V. Breeding Station. All the selection, recombining and testing work was carried out by the Van der Have staff at the Van der Have trials.

D.J. van der Have B.V. is the actual breeder of Scaldis.

'Scaldis' most closely resembles 'Biljart' but 'Scaldis' is
14 cm taller (84 vs. 70), has a 2 cm longer panicle(9 vs. 7),
and heads 5 days later than 'Biljart.'

Signature

D.J. Glas.

#### Exhibit 13D Scaldis Festuca ovina ssp duriuscula (7500014).

<u>Plant</u>	height.				,	- le	tler	6/10/76
	Biljart (C2	50 6) 8É	VC	Scaldis	SED.	VĊ		
1972	73 cm	8.3	11	85 cm	8.8	10	•	
1973	75 cm	5.5	7	88 cm	7.4	8		
1974	68 cm	6.1	9	80 cm	7.3	9		
1975	72 cm	6.1	8	82 cm	6.3	8		

Each year the height has been measured of 60 plants, and well the length of the longest culm.

The difference between the mean plant height of Biljart and Scaldis was significant at 1% level, in each of the year from 1972 to 1975.

#### 2. Length of Panicle.

		SD			SD	
	Biljart (C26)	_S <del>E</del>	VC	Scaldis	_SE	VC
1972	7 cm	_		10 cm	-	-
1973	7 cm	1.5	21	9 cm	2.2	25
1974	7 cm	1.6	23	8 cm	1.7	22
1975	7 cm	3.0	41	9 <b>cm</b>	2.3	26

The difference between the mean panicle length of Biljart and Scaldis was significant at 1% level in all the years 1972 to 1975.

### 3. Length of Flag leaf.

	<del></del>	5D			$\mathcal{O}$	
	Biljart (C26)	8É	VC	Scaldis	SE	VC
1972	4.9 cm	1.5	31	6.2 cm	1.5	24
1973	5.2 cm	1.4	27	5.5 cm	1.2	22
1974	6.3 cm	1.9	31	6.4 cm	1.8	29
1975	5.8 cm	2.2	39	5.6 cm	1.9	35

Each year the length of the flag leaf has been measured of 60 plants.

Only in 1972 the difference between the mean flag leaf length of Biljart and Scaldis was significant at 1% level. In the other years the differences were not significant at 5% level.

### 4. Average date of heading at 52 NL. Scaldis April 23.

Biljart " 18.

Number of days after March 31. The heading date was determined on 60 plants per variety per year when 3 eartips were visible.

Year	Biljart	57D 8E	Scaldis	SP
1972	17	10.0	26	7.3
1973	19	11.9	23	10.4
1974	14	6.1	19	8.0
1975	24	8.0	25	6.8

In all the years 1972 to 1975 the difference between the mean heading date of Biljart and Scaldis was significant at 1% level.

9

### 5. Width of vegetative leaf.

Year	Biljart	Scaldis
1971	2.8	3.8
1972	3.0	4.0
1973	3.8	4.1
1974	3.8	3.7
1975	3.3	3.3

This width of leaf is not measured, but determined in notes rating from 1 to 9. 7 = very small leaved

9 = very wide leaved

Notes based on the average of 60 plants in October, planted in the spring of the same year.

The difference between mean vegetative leaf width of Biljart and Scaldis was found to be  $\underline{\text{not}}$  significant at 5% level.

#### 6. Leaf colour.

Year	Biljart	Scaldis
1971	4 0	
	4.0	6.2
1972	5.4	5.9
1973	5.9	5.6
1974	4.5	6.6
1975	5.4	6.8

Notes in a rating from 1 - 9. 1 = very bright green 9 = very dark green

Notes based on the average of 60 plants in October, planted in the spring of the same year.

The difference between the mean leaf colour of Biljart and Scaldis was significant at 5% level.

The measurements were obtained from the "IVRO" Wageningen.

No.



7500014

### <u> AOBEHIVAHO ZHIVARZ CEHNIZU HHI</u>

TO ALL TO WHOM THESE PRESENTS SHALL COME:

### P. I. van der Have B. V.

Collegeas, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, Therefore, this certificate of plant variety protection is to grant unto the said applicant(s) and the successors, heirs or assigns of the said applicant(s) for the term of \$2000. Years from the date of this grant, subject to the payment of the required fees and periodic replenishment of vlable basic seed of the variety in a public repository as provided by LAW, the right to exclude others from selling the variety, or offering it for sale, or reproducing it, importing it, or exporting it, or using it in producing a hybrid or different ety therefrom, to the extent provided by the Plant Variety Protection Act T. 1542, as amended, 7 u.s.c. 2321 et \$EQ.)

HARD FESCUE

'Scaldis'

In Testimony Whereof, I have hereunto sel my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 2nd day of February in the year of our Lord one thousand nine hundred and seventy-eight

Strate Live W Sching Commission Plant Variety Protection Office Stain Division Agricultural Marketing Service

Secretary of Significations

'ORM GR - 470 (12-15-72)

### UNITED STATES DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION

FORM APPROVED OMB NO. 40-R3712

HYATTSVILLE, MARYLAND 20782

### APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

NSTRUCTIONS: See Reverse.					
1. VARIETY NAME OR TEMPORARY DESIGNATION	2. KIND NAME		FOR OFFICIAL USE ONLY		
Scaldis	Hard fescue		PV NUMBER 750	0014	
3. GENUS AND SPECIES NAME	4. FAMILY NAME (Bo	tanicel)	FILING DATE	TIME /A A.M.	
Festuca ovina ssp.	Graminae		9. ///. 14	BALANCE DUE	
duriuscula	S. DATE OF DETERM	INATION	\$250.00	s 9-17-74	
	1972	er -	\$ 250.00 \$ 250.00	157-12-76 1-16-78	
5. NAME OF APPLICANT(S)	7. ADDRESS (Street a	nd No. of R.F.D. No.,		8. TELEPHONE AREA	
Koninklijk Kweekbedrijf en	Code) P.O. Be	/ /C/// .	nd. 3648	CODE AND NUMBER	
Zaadhandel	Kapella		nd. 3648		
D.J. van der Have B.V.	Nether1	lands 9907	1/16/18		
9. IF THE NAMED APPLICANT IS NOT A PE ORGANIZATION: (Corporation, partnership,	RSON, FORM OF	10. STATE OF INCO		11. DATE OF INCOR-	
Corporation		Netherlands	·	8th March 1973	
12. Name and mailing address of applic	ant representative(s	), if any, to serve	in this application ar	d receive all papers:	
Mr. David J. Hayes.	m. D. J. G	LAS .	Abrahaman .		
1610 Forest Ridge Place,		177 949	Way Zame		
washington 98273	110 120X	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	1,418		
16.0 Forest Ridge Place. Mt. Vernon Washington 98273	Ne the law	3648 '  15	( T. 1 )		
13. CHECK BOX BELOW FOR EACH ATTACH			<del></del>	<del></del>	
🗔 13A. Exhibit A, Origin and Bree	ding History of the	Variety (See Section	on 52 of the Plant Va	riety Protection Act.)	
🗔 138. Exhibit B, Botanical Desc	ription of the Variet	y			
13c. Exhibit C, Objective Desc	ription of the Variet	<b>y</b>	e formation of the particle of the second	•	
🔀 130. Exhibit D, Data Indicative	of Novelty				
13E. Exhibit E, Statement of the	e Basis of Applicant	's Ownership			
144. Does the applicant(s) specify that (See Section 83(a), (If "Yes," an			y name only as a clas ∐YES 🔀 NO	s of certified seed?	
148. Does the applicant(s) specify tha	t this variety be	14C. If "Yes," to	14B, how many gene	rations of production	
limited as to number of generation	ns?	beyond breed		CERTIFIED	
The applicant declares that a viable s			<b>—</b>	<u> </u>	
ance of a certificate and will be reple	ampie of basic seed nished periodically	in accordance with	ii de deposited upon i i such regulations as	may be applicable.	
The undersigned applicant(s) of this	sexually-reproduce	d novel plant varie	ty believes that the t	variety is distinct,	
uniform, and stable as required in So Plant Variety Protection Act.	ection 41 and is enti	illed to protection	under the provisions	Section 42 of the	
Applicant is informed that false repr	esentation herein ca	n jeopardize prote	ction and result in pe	nalties.	
•		e is is	4		
August 2nd. 1974.			//		
August 2nd, 1974.	<del></del>	(s	IGNATURE OF APPLICA	NT).	
<del>-</del>		D	.J. Glas.	1	
(DATE)	<del></del>		IGNATURE OF APPLICA	NTL.	

SCALDIS. HARD FESCUE.

Exhibit 13A.

Hard fescue plants were collected out of the eastern part of the Netherlands in spring 1965. From 50 locations about 6 plants per location were collected so in total 300 plants.

The plants were cloned and observed during 1965 and 1966 in a clone nursery. The clones with the same general characters have been combined in isolation plots for syn 1 seed production in 1967 of experimental varieties.

During 1968 till 1972 these experimental varieties have been observed on two lawn trials in the S.W. of the Netherlands, one on clay soil and one on sendy soil.

By 1969 the experimental HDu2 was proved to have superior turf qualities. Syn 2 seed of HDu2 was harvested in 1970. In 1970 a spaced plant trial end a new turf trial were established to compare the syn 1 and the syn 2 of the experimental HDu2.

No genetic shift in uniformity and turf quality was observed.

By 1972 it was decided to produce enough breeders seed for the anticipated need over the next 15 years and to release the variety in the future under the varietal name of SCALDIS.

Exhibit 138.

There ere no identifying seed characteristics.

The chromosoms number 2n=42.

The growth habit of spaced plants in fall when planted in spring of the same year is prostrate.

The colour of the leaf is dark-grey-green, in comparison with C-26 which is dark green.

Time of heading is fairly early.

Average date of heading May the 1st, in comparison with C-26 April 24th (52 $^{0}$ NL).

Addition to Exhibit A. Scaldis 7500014.

Variants and their frequencies.

During the years of registration trials no "variants" observed.

Sugar Contract Survey and

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ORN	a G	н-6	6 / U	,,

3 COLOR:

# U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782 OBJECTIVE DESCRIPTION OF VARIETY FESCUE

150.50

FESCUE (Festuca spp.)	·
NAME OF APPLICANT(S) Koninklijk Kweekbedrijf en	VARIETY NAME OR TEMPORARY DESIGNATION Scaldis
Zaadhandel, D.J. van der Have B.V.	
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	FOR OFFICIAL USE ONLY
Kapelle 3615, PB 1, Netherlands.	7500014
Tace the appropriate number that describes the varietal character of this variety in the boxes belonumber is either 99 or less or 9 or less. Characteristics described, including numerical measureme kanges may be given also. Measured data should be for SPACED PLANTS. Royal Horticultural mine plant colors; designate system used: I.V.R.O. system. Describall questions need not be answered, however, completeness should be striven for in order to estal stripe of the properties of applications.	nts, should represent those that are vyelled to deter- society or any recognized color (an may be used to deter- c location of test area, <u>Rilland-Wageningen</u> plish the most adequate Variety Identification. <u>Netherland</u>
	14 - KENTUCKY 31
169 2 THATENSIS (MEADOW) 21 - ENSIGN 22 - THADEN	A AMERICANA
3 - F. RUBRA SSP. COMMUTATA (CHEWINGS) 31 - CASCADE 32 - HIGHLIS 4 - F. RUBRA SSP. RUBRA (RED) 41 - BOREAL 42 - PENNLAWN 43 - DA	•
- CONTRACTOR OF THE CONTRACTOR	3 - SCALDIS
6 - F. LONGIFOLIA (HARD) 61 - DURAR 62 - BILJART (C.26) 63 - SC. 7 - OTHER (SPECIFY) F.	
2, CYTOLOGY	· · · · · · · · · · · · · · · · · · ·
4.2 2n CHROMOSOME NUMBER	
3. ADAPTATION: (O = Not Tested; 1 = Not Adapted; 2 = Adapted)	
2 NORTHEAST 2 SOUTHEAST 2 NORTH CENTRAL	2 PACIFIC N.W. 2 OTHER South East for OPECIFY OVERSEEDING
4. MATURITY: (50% Headed) Give Test Area Wageningen - Netherl	ands
DAYS EARLIER THAN	
5. PLANT HEIGHT: (At maturity to top of panicle)	
8 3 8 mm HEIGHT	•
HEIGHT SAME AS	ON VARIETY
1 1 8 mm TALLER THAN	-
6. GROWTH HABIT (Mature)	
	STRATE
7. RHIZOMES	
mm LENGTH mm WIOTH	
0 0 - ABSENT 1 - WEAKLY CREEPING . DAM	EPING (BOREAL) 3- OTHER
8. LEAF BLADE: 1 - LIGHT GREEN (GOLFHOUD) 2 - MODERATELY LIGHT GREEN	EN (HIGHLIGHT) 3 - MEDIUM GREEN (JAMESTOWN, KENTUCKY 31)

7 - OTHER(SPECIFY)\_

6 - GRAYGREEN

FORM GH-470-37 (PAGE 2)	150001F-SCALDIS
8. LEAF BLADE:	1 = SMOOTH BASAL): 0 = ABSENT 1 = PRESENT 2 MARGINS: 2 = SEMI-ROUGH
mm LENGTH (FIRST LEAF BELOW FLAG LEAF)	3 - ROUGH
Mm SHORTER THAN	mm NARROWER THAN
LENGTH SAME AS	ISON WIDTH SAME AS COMPARISON
mm LONGER THAN	mm WIDER THAN ,
9. LEAF SHEATH (Plant Base):	
2 COLOR: 1 = WHITE (HIGHLIGHT) 2 - RED	AURICLE HAIRINESS: 0 - ABSENT 1 - PRESENT
THE THE THE THE PERIOD OF THE	······································
NUMBER OF PANICLES PER PLANT (FIRST YEAR	OF PRODUCTION FALL OR SPRING PLANTING SPECIFY
0 9 0 mm LENGTH	GRAMS OF SEED PER PANICLE
mm SHORTER THAN	GRAMS LESS SEED THAN
LENGTH SAME AS	
20 mm LONGER THAN 6 2	GRAMS MORE SEED THAN
2 SHAPE: 1 - NARROW-TAPERING 2 - EGG SHAPE	3 - OBLONG 4 - OTHER (SPECIFY)
2 TYPE: 1 - OPEN 2 - INTERMEDIATE 3 - COM	PAGT
2 HABIT: 1 = ERECT 2 = NODDING	
2 BRANCHES: 1 - SMOOTH 2 - ROUGH	•
4 COLOR (At 50% flowering): 1 = YELLOWISH GREEN 2 =	GREEN 3+ HILIISH CREEN 4-CURRIEN
6 - OTHER (SPECIFY)	GREEN 3 - BLUISH GREEN 4 - PURPLISH 5 - REDDISH
11. PALEA:	*
1 HAIRS (ON KEELS): 0 - ASSENT 1 - SHORT (OLOS)	2 - LONG (RAINIER)
12. LEMMA:	
1 HAIRS: 0 - ABSENT 1 - PRESENT	2 TEXTURE: 1 = SMOOTH 2 = ROUGH
4 4 mm LEMMA LENGTH	9 7 mm LEMMA WIDTH
0 1 mm SHORTER THAN	mm NARROWER THAN
LENTCH SAME AS	COMPARISON VARIETY
mm LONGER THAN	1 2 mm WIDER THAN. 6 2
1 AWNS: 0-ABSENT 1-PRESENT	, 
1 0 mm AWN LENGTH	<b>5</b> .

-

				1300	OIG SCALD	125
ORM GR-470-37 (PAGE 3)						
mm SHORTER T	HAN	<u>-</u> ])				
LENGTH SAME	as <u>-</u>		APARISOI RIETY	N	•	
mm LONGER TI	HAN				<u>.</u>	
13. SEED:			· _		,	
5 3 9 mm LENGTH	1		9	7 mm WIDTH		
mm SHORTE	ER THAN	<u>-</u> )		mm, NARROWER	THAN	
LENGTH SA	ME AS	- COMP	ARISON ETY	WIDTH SAME AS	COMPARIS	ON
0 7 1 mm LONGE	R THAN 6	2)		1 2 mm WIDER THA	N 6 2)	
0 8 9 8 GRAMS	PER 1000 SEED				,	
GRAMS	LESS THAN	II)				
WEIGH	T SAME AS	- COMP	ARISON ETY			
LA'	J. M. J	5 2 )	·- <u>-</u>			
14. DISEASE, INSECT, A	ND NEMATODE (O =	Not Tosted, 1	- Susceptil	ole, 2 = Resistant):		
0 HELMINTHOSPORIL	M VAGANS	0 н. 50	ROKINIA	NUM	H. DICTYOIDES	
O RHIZOCTONIA SOL	ANI	2 <u>ERY</u>	IPHE GR	AMINIS	0 USTILAGO STRIIFORM	115
2 FUSARIUM NIVALE		=-	DSE <u>UM</u>		2 TYPHULA IOTANA	
2 PUCCINIA GRAMIN	<u>is</u>	0 2.51	HIIFORM	us_	2 P. POAE-NEMORALIS	
2 P. CORONATA		<u>  -                                   </u>	HIUM UL1	<u>rimum</u>	2 CONTICIUM FUSCIFOI	
O: SCLEROTINIA HOM	IEOCARPA	O INSE			O NEMATODE	
OTHER		ОТН				
16. GIVE VARIETY OR	VARIETIES THAT M	OST CLOSELY	RESENIE	LE THE APPLICATION V	ARIETY. For the following characte	ristics
indicate degree of res	emblance (D.H.) by pla ty is less than comparis	om variety	unn marke	d, D.R., one of the followi 2 = Same as	ing mentional	
3 = More than, better	, greator, darker, more	disease resistan		<del></del>	<u>, - : : : : : : : : : : : : : : : : : : </u>	<del></del>
CHARACTER	VARIET		D.A.	CHARACTER	VARIETY	<u> 0. A</u>
- CERMINATION RATE-	Biljart -	62	2	GROWTH HABIT	Biljart - 62	3
. RHIZOME LENGTH	"	<del></del>		LEAF COLOR	11	3
LEAF WIDTH	11	, ,	3 3	PANICLE SHAPE		2 2
PANICLE COLOR				ī.	11	1 2
PANICLE COLOR WINTER COLOR	11		3	COLDINIURY		<del>-  </del> -
PANICLE COLOR	11 11		3 2 2	COLDINIURY	11	$\frac{2}{2}$

ţ

<sup>\* &#</sup>x27;Good seen used in planting under good conditions for germination and yield evaluation...

x Scaldis somewhat more erect. 6

Exhibit 13D.

Scaldis Hard feacue is the first dark-grey-green, fairly early heading variety to be developed.

Compared with the average collected material, a considerable improvement was obtained in colour, turf density, persistancy and uniformity.

Exhibit 13E.

The original material was collected by the staff of D.J. van der Have B.V. Breeding Station. All the selection, recombining and testing work was carried out by the Van der Have staff at the Van der Have trials.

D.J. van der Have B.V. is the actual breeder of Scaldis.

Exhibit D 'Scaldis'

PV # 7500014

'Scaldis' most closely resembles 'Biljart' but 'Scaldis' is 14 cm taller (84 vs. 70), has a 2 cm longer panicle(9 vs. 7), and heads 5 days later than 'Biljart.'

Signature

D.J. Glas.

#### Exhibit 13D Scaldis Festuce ovine sep duriuscule (7500014).

#### 1. Plant height.

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۰	1 40116	HOTELLE.		_			′	-	
				50			$\varsigma D$		
		Biljart	(C26)	SE	VC	Scaldis	£έ	VC	
	1972	73 cm		8.3	11	85 cm	8.8	10	
	1973	75 cm		5.5	7	88 cm	7.4	8	
	1974	68 cm		6.1	9	80 cm	7.3	9	
	1975	72 cm		6.1	8	82 cm	6.3	8	

Each year the height has been measured of 60 plants, and well the length of the longest culm.

The difference between the mean plant height of Biljert and Scaldis was significant at 1% level, in each of the year from 1972 to 1975.

#### 2. Length of Panicle.

		SD			SV	
Biljart	(C26)	_SE	VC	Scaldis	_ <del>SE</del>	VC
7 cm		-	-	10 cm	-	-
<i>7</i> cm		1.5	21	9 cm	2.2	25
7 cm		1.6	23	8 cm	1.7	22
7 cm		3.0	41	9 cm	2.3	. 26
	7 cm 7 cm 7 cm	7 cm 7 cm 7 cm	Biljart (C26) SE 7 cm - 7 cm 1.5 7 cm 1.6	Biljart (C26) SP VC 7 cm 7 cm 1.5 21 7 cm 1.6 23	Biljart (C26) SP VC Scaldis 7 cm - 10 cm 7 cm 1.5 21 9 cm 7 cm 1.6 23 8 cm	Biljart (C26) SP VC Scaldis SE 7 cm - 10 cm - 1.5 21 9 cm 2.2 7 cm 1.6 23 8 cm 1.7

The difference between the mean panicle length of Biljart and Scaldis was significant at 1% level in all the years 1972 to 1975.

#### 3. Length of Flag leaf.

		5D			$\mathcal{D}$	
	Biljart (C26)	≥8€	VC	Scaldis	SE	VC
1972	4.9 cm	1.5	31	6.2 cm	1.5	24
1973	5.2 cm	1.4	27	5.5 cm	1.2	22
1974	6.3 cm	1.9	31	6.4 cm	1.8	29
1975	5.8 cm	2.2	39	S.6 cm	1.9	35

Each year the length of the flag leaf has been measured of 60 plants.

Only in 1972 the difference between the mean flag leaf length of Biljart and Scaldis was significant at 1% level. In the other years the differences were  $\underline{\text{not significant}}$  at 5% level.

### 4. Average date of heading at 52 NL. Scaldis April 23.

Biljart 18.

Number of days after March 31. The heading date was determined on 60 plants Number of days after March 31. The heading approximately per year when 3 eartips were visible.  $\sim 70$ 

Year	Biljart	₽Ę	Scaldis	SE_
4070	45	40.0		7.0
1972	17	10.0	26	7.3
1973	19	11.9	23	10.4
1974	14	6.1	19	8.0
1975	24	8.0	25	6.8

In all the years 1972 to 1975 the difference between the mean heading date of Biljart and Scaldis was significant at 1% level.

#### 5. Width of vegetative leaf.

Year	Biljart	Scaldis
4074		
1971	2.8	3.8
1972	3.0	4.8
1973	3.8	. 4.1
1974	3.8	3.7
1975	3.3	3.3

This width of leaf is not measured, but determined in notes rating from

1 to 9. 7 = very small leaved 9 = very wide leaved Notes based on the average of 60 plants in October, planted in the spring of the same year.

The difference between mean vegetative leaf width of Biljart and Scaldis was found to be  $\underline{not}$  significant at 5% level.

#### 6. Leaf colour.

Year	<u> </u>	Scaldis
		The sea
1971	4.8	6.2
1972	5.4	5.9
1973	5.9	5.6
1974	4.5	6.6
1975	5.4	6.8

Notes in a rating from 1 - 9. 1 = very bright green 9 = very dark green

Notes based on the everage of 60 plants in October, planted in the spring of the same year.

The difference between the mean leaf colour of Biljert and Scaldia was significant at 5% level.

The measurements were obtained from the "IVRO" Wageningen.